

GA CAMERA CLUB (GACC)

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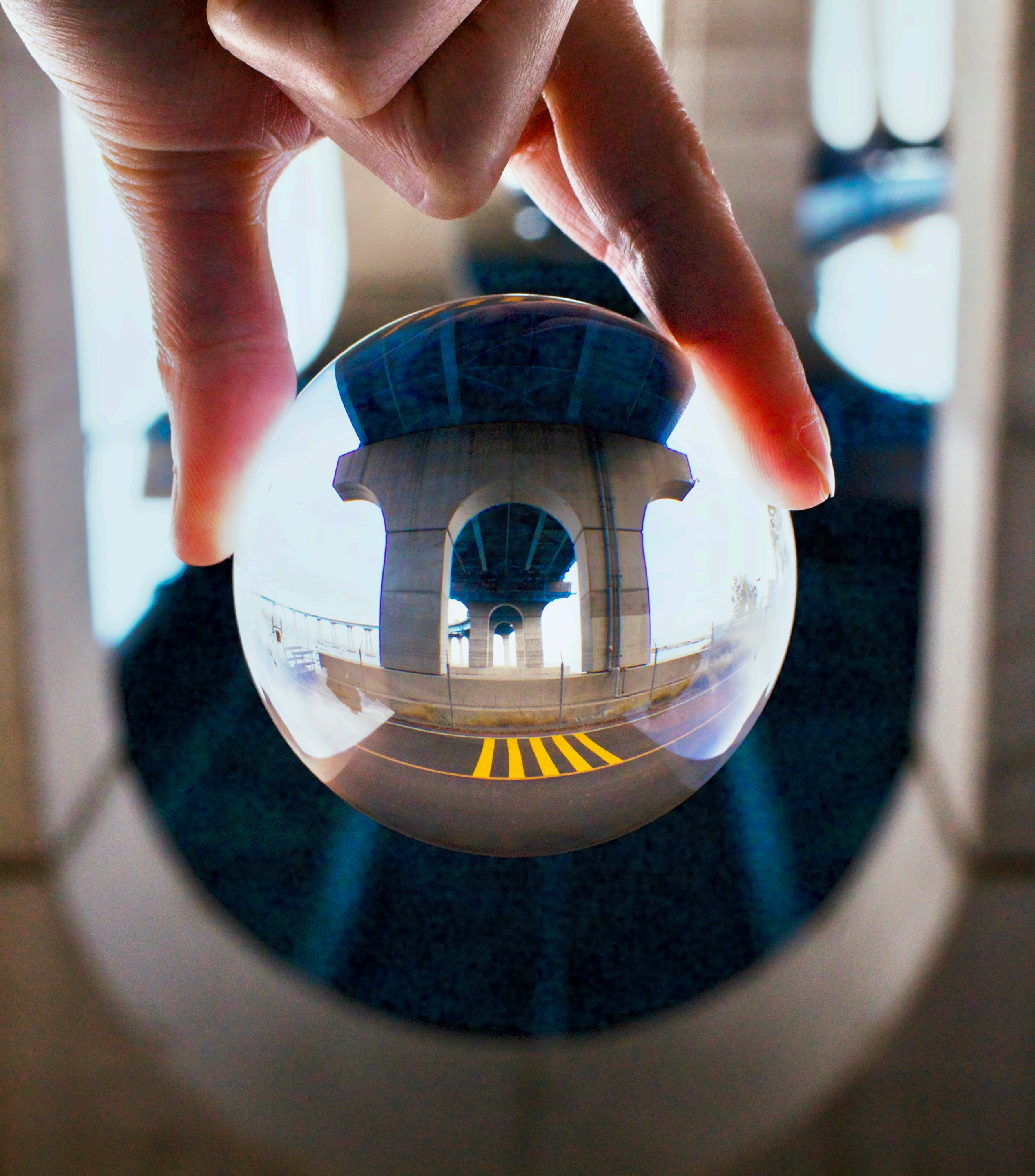
APRIL 28, 2022

LENSBALL PHOTOGRAPHY

WHAT IS A LENSBALL?

- A *Lensball* is a glass sphere or crystal ball, typically made of lens-grade or optical-quality glass.
- Lensball photography is simply shooting your photo through the ball to magnify/frame your subject, essentially giving you a fisheye effect for a fraction of the cost of an actual fisheye lens. (Lensball ~ \$50, fisheye lens ~ \$1,000)
- Note, however, that the image in the Lensball will appear upside-down due to a process called *refraction*.



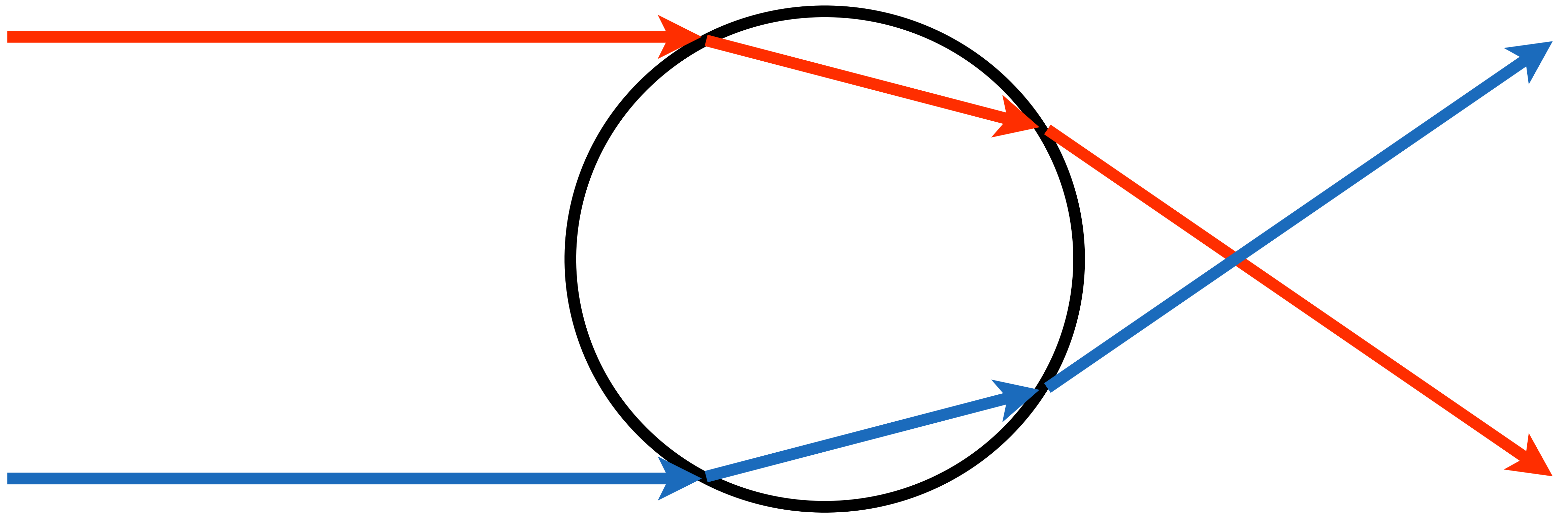


WHAT IS REFRACTION?

- *Refraction* is the turning or bending of any wave, such as a light or sound wave, when it passes from one medium into another of different density.
- Because glass is more dense than air, light bends as it passes through the Lensball, resulting in a upside-down/miniature image in the ball.
- The image is upside-down, because that is how light bends through a glass sphere.

HOW REFRACTION WORKS

LIGHT BENDS THROUGH THE GLASS SPHERE AND INVERTS THE IMAGE



HOW TO USE A LENSBALL

- Using a Lensball is very straightforward:
 1. Set up the ball in front of your lens.
 2. Focus your lens at the center of the ball.
 3. Take your photo!





HOW TO SET UP YOUR LENSBALL

- There are lots of options for how to set up your Lensball:
 - Hold it yourself.
 - Have a friend hold the ball for you.
 - Use a Lensball stand.
 - Make your own stand.
 - Place the ball on a flat surface.
 - Use a tripod mount.

CAMERA LENSES AND SETTINGS

- **Camera lenses.** — Any focal length or camera lens will work with Lensballs (even your iPhone can take decent shots), but if you want to get really close to the glass, you'll want a *macro lens*.
- **Camera settings.** — You can use a large range of apertures, depending on how much of the background you want in focus. Using an *aperture of f/4* or so is a good starting point though, as it will effectively blur out the background while still keeping a sharp image inside the ball.





TIPS AND TRICKS

- ***Know your light source.*** — It's important to have the area behind your Lensball be brighter than where you are to avoid catching your own reflection in the ball. Also be careful of direct sun on the ball, as it is essentially a magnifying glass.
- ***Consider the elevation.*** — You may need to hold or place your Lensball higher up to capture your subject. Having a friend hold the ball is very helpful in this case.
- ***Position your Lensball carefully.*** — A Lensball is perfectly round, and so it can roll away very easily. Make sure the ball is secure before stepping away.
- ***Post-processing for different effects.*** — In photo editing software, remove your hand/the Lensball stand for a floating ball effect, flip the upside-down image so it's right-side up, colorize the Lensball to make it contrast with the background, etc.

DIFFERENT LENSBALL SIZES

- **60mm.** — The 60mm Lensball is small and relatively light. It is great for travel, but the smaller ball may make it harder to capture your full subject in focus. (Weight 0.55lbs)
- **80mm.** — The 80mm Lensball allows you to capture your entire surrounding in full sharpness, and the added size makes it easier to get a good focus, but it is heavier. (Weight 1.45lbs)
- **100mm.** — The 100mm Lensball is a fun photography accessory for those who want to capture a wider shot, but the extra size and weight is more than what most people want/need, particularly for travel. (Weight 3.6lbs)





SAFETY NOTE!

- Lensballs have a strong magnifying effect. When left exposed to direct sunlight, a Lensball can start a fire within seconds!
- Always make sure to cover your Lensball with a cloth or bag when you store it, and be careful about placement of the Lensball when taking photos.

HELPFUL LINKS

- <https://lensball.com/pages/faq>
- <https://www.adobe.com/creativecloud/photography/discover/lensball-photography.html>
- <https://digital-photography-school.com/7-steps-refraction-photography/>
- <https://shotkit.com/crystal-ball-photography/>

"A photon checks into a hotel and is asked if it needs any help with its luggage..."

– IT REPLIES, "NO THANKS, I'M TRAVELING LIGHT."

